CONTINUUM™ DGDA-2502 BK

High Density Polyethylene Resin

The Dow Chemical Company

Message:

CONTINUUM™ DGDA-2502 BK Bimodal Polyethylene Resin is produced using UNIPOL™ II process technology. This product may be utilized for pipe applications where long-term hydrostatic strength combined with outstanding resistance to slow crack growth, rapid crack propagation, and high melt strength is desired. Suitable applications include natural gas distribution pipes, large diameter industrial piping, mining, sewage, and municipal water service lines. DGDA-2502 BK has excellent processability for the full range of pipes sizes and wall thicknesses to include heavy wall pipe.
Industrial Standards Compliance:
ASTM D 3350: cell classification
Natural - PE445574A
Black - PE445574C (see Notes 1 & 2)
Plastics Pipe Institute (PPI): TR-4
Natural Pipe - CONTINUUM™ DGDA-2502 NT
ASTM PE4710 pipe grade - 1600psi HDB,1000psi HDS @ 73oF, and 1000psi HDB @ 140oF
Black Pipe - CONTINUUM DGDA-2502 BK (see Notes 1 & 2)
ASTM PE4710 pipe grade - 1600psi HDB, 1000psi HDS @ 73oF, and 1000psi HDB @ 140oF
NSF International : Standard 14 & 61
Natural Pipe - DGDA-2502 NT
Black Pipe - DGDA-2502 BK (see Notes 1 & 2)
Consult the regulations for complete details.
Notes:
(1) The first five numbers of the cell classification are based on natural resin. The last number and letter are based on black resin (natural resin plus 6.5% DFNF-0092).
(2) Natural resin extruded under proper conditions with carbon black masterbatch DFNF-0092 (6.5%).

General Information			
Additive	Processing Aid		
Agency Ratings	ASTM D 3350 PE445574A		
	ASTM D 3350 PE445574C		
	NSF Unspecified Rating		
	PPI TR-4		
Forms	Pellets		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			ASTM D792
Natural	0.949	g/cm³	
Black [1]	0.959	g/cm³	
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	0.040	g/10 min	
190°C/21.6 kg	13	g/10 min	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	61		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			ASTM D638
Yield	> 24.1	MPa	
Break	> 32.1	MPa	

Tensile Elongation			ASTM D638
Yield	> 16	%	
Break	> 500	%	
Flexural Modulus [2]	924	MPa	ASTM D790B
Resistance to Rapid Crack Propagation, Pc - S-4 (32°F) [3]	> 12.0	bar	ISO 13477
Resistance to Rapid Crack Propagation, Tc - S-4 (5 bar) [4]	-1	°C	ISO 13477
Slow Crack Growth PENT - 2.4 MPa (176°F)	> 10000	hr	ASTM F1473
Thermal Stability	> 220	°C	ASTM D3350

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	72.8	°C	ASTM D648
Brittleness Temperature	< -75.0	°C	ASTM D746
Vicat Softening Temperature	127	°C	ASTM D1525
Melting Temperature (DSC) [5]	113	°C	Internal Method

NOTE	
1.	Natural resin extruded under proper conditions with carbon black masterbatch DFNF-0092 BK (6.5%)
2.	Method I (3 point load)
3.	Pipe diameter of 10 inch IPS (25.4 cm) and Standard Diameter Ratio (SDR) 11
4.	Pipe diameter of 10 inch IPS (25.4 cm) and Standard Diameter Ratio (SDR) 11
5.	113°C

Recommended distributors for this material

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